

	Type	Hits	Search Text	DBs	Time Stamp
1	BRS	28719	electro-phoretic\$ or electrophoretic\$	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/12/02 15:52
2	BRS	330620	ink	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/12/02 15:50
3	BRS	143261	encapsulat\$	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/12/02 15:50
4	BRS	850	((electro-phoretic\$ or electrophoretic\$) and ink and encapsulat\$	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/12/02 15:51
5	BRS	395343	binder\$	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/12/02 15:52
6	BRS	508	((electro-phoretic\$ or electrophoretic\$) and ink and encapsulat\$) and binder\$	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/12/02 15:52
7	BRS	164	(electro-phoretic\$ or electrophoretic\$) near3 ink\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/12/02 15:52
8	BRS	38	((((electro-phoretic\$ or electrophoretic\$) and ink and encapsulat\$) and binder\$) and ((electro-phoretic\$ or electrophoretic\$) near3 ink\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/12/02 15:53

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	Document ID	1	S o u r c e	Issu e Date	Pa ge s	Title	Current OR	Current XRef
1	US 20010045934 A1	<input checked="" type="checkbox"/>	U S - P G P U B	2001 1129	22	Printable electronic display	345/107	
2	US 6262706 B1	<input checked="" type="checkbox"/>	U S - P A T	2001 0717	32	Retroreflective electrophoretic displays and materials for making the same	345/107	204/606; 257/E27 .111; 257/E27 .117; 257/E51 .006; 257/E51 .041; 257/E51 .047; 257/E51 .049; 345/85; 349/86; 359/296
3	US 20020021270 A1	<input checked="" type="checkbox"/>	U S - P G P U B	2002 0221	9	Bistable electro-optic display, and method for addressing same	345/84	345/204
4	US 6392786 B1	<input checked="" type="checkbox"/>	U S - P A T	2002 0521	16	Electrophoretic medium provided with spacers	359/296	204/606; 345/107
5	US 6392785 B1	<input checked="" type="checkbox"/>	U S - P A T	2002 0521	33	Non-spherical cavity electrophoretic displays and materials for making the same	359/296	204/487; 204/606; 264/4; 264/8; 345/107; 427/213 .3

	Document ID	1	S o u r c e	Issu e Date	Pa ge s	Title	Current OR	Current XRef
6	US 6323989 B1	<input checked="" type="checkbox"/>	U S P A T	2001 1127	26	Electrophoretic displays using nanoparticles	359/296	345/107
7	US 6262833 B1	<input checked="" type="checkbox"/>	U S P A T	2001 0717	27	Capsules for electrophoretic displays and methods for making the same	359/296	204/450 ; 204/606 ; 264/4; 345/107
8	US 6312304 B1	<input checked="" type="checkbox"/>	U S P A T	2001 1106	21	Assembly of microencapsulated electronic displays	445/24	313/506



US 20020055461A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2002/0055461 A1**

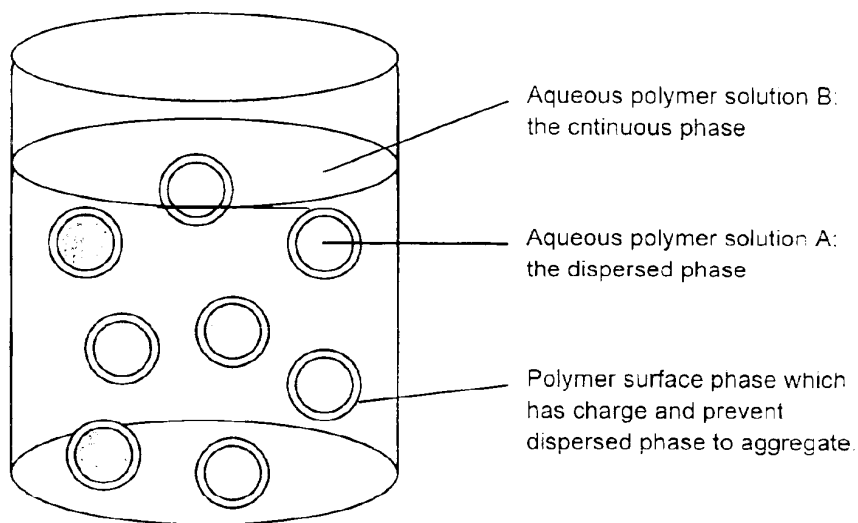
Jin et al.

(43) **Pub. Date: May 9, 2002**(54) **STABLE POLYMER AQUEOUS/AQUEOUS EMULSION SYSTEM AND USES THEREOF****Related U.S. Application Data**

(63) Non-provisional of provisional application No. 60/214,037, filed on Jun. 23, 2000.

(76) Inventors: **Tuo Jin**, Highland Park, NJ (US); **Li Chen**, Toronto (CA); **Hua Zhu**, Plainsboro, NJ (US)**Publication Classification**(51) **Int. Cl.⁷** **A61K 38/16**; **A61K 9/16**;
A61K 9/50(52) **U.S. Cl.** **514/2**; 264/4.1, 424.491Correspondence Address:
Albert Wai-Kit Chan
Attorney at Law
Suite 604
141-07 20th Ave.
Whitestone, NY 11357 (US)(57) **ABSTRACT**

This invention provides a stable aqueous aqueous emulsion system which is prepared with a hydrophilic polymer. This invention also provides the method of preparing a stable aqueous aqueous emulsion. Finally, this invention provides an encapsulation comprising the emulsion system which is prepared with a hydrophilic polymer.

(21) Appl. No.: **09/886,555**(22) Filed: **Jun. 21, 2001**

Polymer solution A and polymer solution B are immiscible, thus A can be dispersed into B under a shear stress. The third polymer carries charge and is fairly immiscible with both A and B at low concentration, so that it tends to be rich at the interface of A and B, and forms a charged surface. The charged surface effectively prevent aggregation and fusion of the dispersed phase (See *Example 1* in the paragraph). Therapeutic agents such as proteins, liposomes and viruses are partitioned and encapsulated in the dispersed phase and subjected to lyophilization (See *Examples 2, 3 and 4*).

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	164	(electro-phoretic\$ or electrophoretic\$) near3 ink\$3	USPAT; US-PGPU B; EPO; 2002/ JPO; 12/03 DERWENT 17:34 ; IBM_TDB	
2	BRS	L2	143411	encapsulat\$	USPAT; US-PGPU B; EPO; 2002/ JPO; 12/03 DERWENT 17:34 ; IBM_TDB	
3	BRS	L3	1910824	binder\$ or fluid\$2 or suspension\$2	USPAT; US-PGPU B; EPO; 2002/ JPO; 12/03 DERWENT 17:36 ; IBM_TDB	
4	BRS	L4	38	((electro-phoretic\$ or electrophoretic\$) and ink and encapsulat\$) and binder\$) and ((electro-phoretic\$ or electrophoretic\$) near3 ink\$3)	USPAT; US-PGPU B; EPO; 2002/ JPO; 12/03 DERWENT 17:42 ; IBM_TDB	
5	BRS	L5	126	1 not 4	USPAT; US-PGPU B; EPO; 2002/ JPO; 12/03 DERWENT 18:06 ; IBM_TDB	

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6	BRS	L6	506	359/296;345/107.ccls.	USPAT; US-PGPU B; EPO; JPO; DERWENT; IBM_TDB	2002/ 12/03 18:07
7	BRS	L7	1196500	@pd>=20020301	USPAT; US-PGPU B; EPO; JPO; DERWENT; IBM_TDB	2002/ 12/03 18:08
8	BRS	L8	81	6 and 7	USPAT; US-PGPU B; EPO; JPO; DERWENT; IBM_TDB	2002/ 12/03 18:08
9	BRS	L9	5336	430/32-35,58.8,19;264/4-4. 7;252/586;428/402.2-402.24 .ccls.	USPAT; US-PGPU B; EPO; JPO; DERWENT; IBM_TDB	2002/ 12/03 18:08
10	BRS	L10	166	7 and 9	USPAT; US-PGPU B; EPO; JPO; DERWENT; IBM_TDB	2002/ 12/03 18:08

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11	BRS	L1 1	240	8 or 10	USPAT; US-PGPU B; EPO; JPO; DERWENT; IBM_TDB	2002/ 12/03 18:09
12	BRS	L1 2	234	11 not 5	USPAT; US-PGPU B; EPO; JPO; DERWENT; IBM_TDB	2002/ 12/03 18:10
13	BRS	L1 3	219	11 not 1	USPAT; US-PGPU B; EPO; JPO; DERWENT; IBM_TDB	2002/ 12/03 18:10
14	BRS	L1 4	219	13 not 4	USPAT; US-PGPU B; EPO; JPO; DERWENT; IBM_TDB	2002/ 12/03 18:10